

**IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION**

CYWEE GROUP LTD.,

Plaintiff,

v.

SAMSUNG ELECTRONICS CO., LTD. AND
SAMSUNG ELECTRONICS AMERICA, INC.

Defendants.

CASE NO. 2:17-cv-00140-RWS-RSP

JURY TRIAL DEMANDED

**PLAINTIFF'S SUR-REPLY IN OPPOSITION TO DEFENDANTS' MOTION FOR
SUMMARY JUDGMENT OF INVALIDITY UNDER 35 U.S.C. § 101**

I. INTRODUCTION

Samsung's Reply to CyWee's Response to Samsung's Motion for Summary Judgment of Invalidity Under 35 U.S.C. § 101¹ again depends on misinterpretations of the law and a fundamentally flawed description of the inventions claimed in CyWee's asserted patents.

II. ARGUMENT

A. The combination of multiple sensors to correct errors in calculating a three dimensional device's orientation in space was previously unknown in the art.

Samsung's Reply fails to address CyWee's evidence that the Patents-in-Suit are directed to “novel and unconventional techniques of using more motion sensors—i.e., multiple accelerometers, gyroscopes, or magnetometers—to obtain raw data that allows the inventions to more accurately calculate the device's orientation than was previously possible.”² Samsung argues *without citing to any evidence* that “combining multiple types of such sensors was known before CyWee filed its patents.”³ Neither Samsung's Motion nor its Reply offers any evidence that the techniques by which CyWee combined sensors was known; indeed, Samsung's Reply all but concedes this point.⁴

If Samsung had been able to find any prior art where an accelerometer, gyroscope and magnetometer were combined to fuse sensing data to calculate a handheld device's three-dimensional orientation in space as claimed by the Patents-in-Suit, it would have filed an *inter*

¹ Referred to hereinafter as “Reply” and cited to as Dkt. 201. The Motion for Summary Judgment of Invalidity Under 35 U.S.C. § (“Motion”) is Dkt. 178.

² Dkt. 192 (the “CyWee Opposition”).

³ Dkt. 201 at 1.

⁴ *Id.* When asked if the components [sensors] were “generic, well-known components” a CyWee inventor stated the obvious, and irrelevant as to 35 U.S.C. § 101 answer: “If you look at them *separately*, of course, they are known components.” (emphasis added).

partes review or cited such art in its Motion or Reply.⁵ It did none of those things, thereby conceding that no such prior art exists. Failure to present any evidence of conventional use demonstrates that Samsung cannot meet its clear and convincing evidence standard.⁶

The Nasiri reference cited in the Reply does not disclose use of sensing elements as claimed by the Patents-in-Suit.⁷ Indeed, as Samsung readily admits, the Examiner explicitly considered Nasiri when allowing the issued claims. For example, regarding claim 1, the ‘438 patent Examiner expressly held that Nasiri does **not** teach the technique where “the measured state includes a measurement of said second signal set and a predicted measurement obtained based on the first signal set.” Similarly, with respect to claims 14 and 19 of the ‘438 patent, the Examiner explicitly held that “Nasiri does not expressly teach calculating predicted axial accelerations Ax, Ay, Az, based on the measured angular velocities wx, wy, wz of the current state of the six-axis sensor module motion sensor module.” Moreover, Nasiri does not teach or suggest a technique where the current state “is a second quaternion with respect to said current time T” or performing calculations using that quaternion as required by the “comparing the second quaternion . . .” as recited by claims 14 and 19.

The ‘978 patent states that the “present invention provides an enhanced comparison method and/or model to eliminate accumulated errors . . . generated by a ***combination of motion sensors***,

⁵ The only art Samsung cited in its Motion or Reply was art already made of record and distinguished by CyWee during prosecution.

⁶ See *Magna Electr., Inc. v. Valeo, Inc.*, 2017 WL 9471686 *13 (E.D. Mich. April 10, 2017) (“Defendants have not developed a sufficiently adequate record for me to conclude, from the pleadings that what Defendants contend to have been conventional was indeed conventional.”).

⁷ It is also somewhat odd to claim that a single patent application published after the Patent-in-Suit’s priority date would indicate the Patent-in-Suit’s claims utilize gyroscopes, accelerometers and magnetometers in a conventional way. Even if the Nasiri Application was using the components in the same way as the Patent-in-Suit (it was not), inventor Nasiri claims that his use was ***unconventional*** and therefore patentable. Nasiri ¶ [0023].

including the ones generated by accelerometers Ax, Ay, Az, the ones generated by magnetometers Mx, My, Mz and the ones generated by gyroscopes ω_x , ω_y , ω_z in dynamic environments.”⁸ In contrast to the ’978 patent’s novel, unconventional combined use of sensing elements, Nasiri requires reducing errors solely based on data from only an accelerometer and gyroscope that is not fused.⁹ Nasiri does not teach or suggest the technique of using both a plurality of measured magnetisms and predicted magnetisms as required by claim 10.

Further, *Nasiri is not prior art*. CyWee alleged a priority date of July 29, 2009 for all asserted claims of the ’438 patent, and a priority date of September 25, 2009 for claims 10 and 12 of the ’978 patent. Nasiri was published on October 22, 2009, and therefore cannot qualify as a publication predating CyWee’s priority dates. Because Nasiri is not prior art, it cannot be evidence of a prior conventional use, either individually or in combination, to invalidate the Patents-in-Suit.¹⁰

No evidence in the record supports Samsung’s claims that the sensors, as claimed in the Patents-in-Suit, are being used in a conventional manner and the evidence to the contrary cited in the CyWee Response remains undisputed.

B. Samsung’s Reply fails to distinguish *Thales*.

*Thales Visionix, Inc. v. United States*¹¹ involved a nearly identical technological subject matter to the Patents-in-Suit. Samsung argues the *Thales* patent’s non-conventional “placement

⁸ ’978 patent 4:33-44 (emphasis added).

⁹ Nasiri ¶ 49.

¹⁰ *Aatrix Software, Inc. v. Green Shades Software, Inc.*, 890 F.3d 1354, 1356 (Fed. Cir. 2018) (affirming that “[w]hether a claim element or combination of elements would have been well-understood, routine, and conventional to a skilled artisan in the relevant field at a particular point in time” is question of fact). CyWee Opposition at 4-7.

¹¹ 850 F.3d 1343 (Fed. Cir. 2017).

of the sensors” rendered it patentable.¹² But that ignores the database analogy to *Enfish* used by the *Thales* court in ultimately holding the invention to be patent eligible:

Just as claims directed to a new and useful ***technique for defining a database*** that runs on general-purpose computer equipment are patent eligible, *Enfish*, 822 F.3d at 1337-38, so too are claims directed to a new and useful technique for using sensors to more efficiently track an object on a moving platform. That a mathematical equation is required to complete the claimed method and system does not doom the claims to abstraction.¹³

Just as a “new and useful technique defining a database” does not require the physical positioning of components, nothing in *Thales* made the relative physical position of the sensing elements key to patent eligibility, and other courts have not interpreted *Thales* to require it. *See Science Applications Int’l Corp. v. United States*, 135 F. Cl. 661, 667-668 (Fed. Cl. 2018)(citing *Thales* and finding eligible claims that do not state relative position or location, but instead “a first orientation sensor adapted to detect an orientation of the video camera;” “a second orientation sensor adapted to detect an orientation of the HUD;” and “a computer adapted to receive sensor data from the first and second orientation sensors ...”).

It is the new and useful *technique* that determines patent eligibility, and CyWee’s technique for error correction and an improved display output is both new and indisputably useful. *Rapid Litig. Mgmt. Ltd. v. CellzDirect, Inc.*, 827 F.3d 1042, 1048, 1050 (Fed. Cir. 2016) (holding that claims directed to “a new and useful laboratory technique for preserving hepatocytes,” a type of liver cell, were not abstract); *see also Diamond v. Diehr*, 450 U.S. 175, 187, 101 S.Ct. 1048, 67 L.Ed.2d 155 (1981) (holding that claims for a method to cure rubber that employed a formula to calculate the optimal cure time were not abstract). The correction of sensing data errors to a

¹² Dkt. 178 at 10.

¹³ *Thales* at 1349 (citing *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1337-1338 (Fed. Cir. 2017) (emphasis added).

degree never before known is also an improvement in functionality to the claimed three dimensional pointing device that is indisputably patentable. *Enfish*, 822 F.3d at 1338-1339; *see Agri-Labs Holding, LLC v. Taplogic, LLC*, 304 F. Supp. 773, 785 (N.D. Ind. 2018) (“[T]echnological inventions that improve upon existing processes to come to the same result more efficiently or ***more accurately*** are patent-eligible subject matter) (emphasis added). The Patents-in-Suit clearly qualify.

III. CONCLUSION

The Federal Circuit and other courts have already analyzed and found that nearly identical technologies are patent-eligible. Additionally, genuine issues of material fact exist concerning whether the combination of sensors used in the inventions claimed in the '438 and '978 patents were well-known and conventional when the patents were filed. Samsung has failed to overcome these fact issues with any competent summary judgement evidence, and thus has failed to meet its clear and convincing evidence burden. Accordingly, Samsung's Motion must be denied.

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Respectfully submitted,

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CERTIFICATE OF SERVICE

The undersigned certifies that all counsel of record who are deemed to have consented to electronic service are being served with a copy of this document via the Court's CM/ECF system per L.R. CV-5(a)(3) on October 16, 2018.

/s/ Christopher L. Evans

Christopher L. Evans